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Haessig discloses the invention substantially as claimed. Haessig discloses a ventilation flow control unit having a flow controller 69, 63, 63A mounted on a plenum, a flow sensor 80 and a thermal coil 55 fixed in the plenum. Official Notice is taken that electrical disconnects such a plug and sockets, switches or wire terminals, voltage transformers for reducing supply voltage, automatic control valves on cooling coils to control cooling, and mounting brackets to support control valves are conventional in the air conditioning art. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Haessig such that it included the use of same.

Applicants respectfully traverse.

M.P.E.P. § 2142 sets forth the procedural framework for the examination process of determining obviousness:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. If, however, the examiner does produce a *prima facie* case, the burden of coming forward with evidence or arguments shifts to the applicant who may submit additional evidence of nonobviousness...

M.P.E.P. §2143 sets forth the requirements of a *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Thus, if any element of the *prima facie* case of obviousness is not met, the obviousness rejection is improper and should be withdrawn.

Claims 7-9 and 12:

No *prima facie* case of obviousness is established with respect to Claim 7, because the prior art does not teach or suggest all the limitations of Claim 7. For example, the cited prior art

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does not disclose "a protection bracket mounted to protect said automatic valve from damage during transportation and installation of said ventilation flow control unit," as recited in Claim 7. Applicant notes that the Examiner has taken official notice that mounting brackets to support control valves are conventional in the air conditioning art. However, Claim 7 recites "a protection bracket." In addition, Haessig does not disclose "a flow sensor mounted to said plenum," as recited in Claim 7. As shown in Fig. 1 of Haessig, sensor 80, 80A is not included in terminal unit 42, but is instead mounted in duct 81, which conveys air to terminal unit 42. (Col. 6, Lines 40-45) For at least these reasons, the third element of the prima facie case of obviousness is not satisfied.

Applicant also notes that the first element of the prima facie case of obviousness is not satisfied for Claim 7. In particular, the Examiner has not identified any suggestion or motivation to modify the system of Haessig to obtain Applicants' claimed invention. The Examiner has merely taken official notice that various components are conventional in the air conditioning art, and then concluded that it would be obvious to modify Haessig to include such components to obtain Applicants' claimed invention. No suggestion or motivation for such modification is provided. Therefore, the first element of the prima facie case of obviousness is not satisfied, and the rejection of Claim 7 is improper.

Claims 8-9 and 12 depend from Claim 7 and are, therefore, distinguishable over the prior art for at least the reasons provided above for Claim 7.

In addition, Claim 9 recites "at least one fluid line of said thermal coil is mounted to said plenum." Haessig does not show any fluid lines coupled to heating coil 65, nor has the Examiner provided a suggestion or motivation for mounting fluid lines to the plenum. Thus, the first and third elements of the prima facie case of obviousness are not satisfied with respect to Claim 9.

Claim 12 recites additional details with respect to the structure of the protection bracket. As indicated above, Haessig does not disclose a protection bracket at all, and certainly not one having the claimed structure. In addition, the Examiner has not identified any suggestion or motivation to provide a protection bracket having the claimed structure to the system of Haessig. Therefore, the first and third elements of the prima facie case of obviousness are not satisfied with respect to Claim 12.

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Claims 13, 43, and 44:

Claim 13 recites (in part): "a flow sensor mounted to said plenum." As indicated above with respect to Claim 7, sensor 80, 80A of Haessig is not mounted in terminal unit 42, but is instead mounted in duct 81. Nor has the Examiner identified any suggestion or motivation to so modify the system of Haessig. Therefore, the first and third elements of the *prima facie* case of obviousness are not satisfied with respect to Claim 13.

Claims 43 and 44 depend from Claim 13 and are, therefore, distinguished from Haessig for at least the same reasons as Claim 13.

Claims 14-19:

Claim 14 recites (in part): "a flow sensor mounted to said plenum." As indicated above with respect to Claims 7 and 13, Haessig does not teach or suggest this limitation, nor has the Examiner identified a suggestion or motivation in the prior art to modify Haessig. Therefore, no *prima facie* case of obviousness is established with respect to Claim 14.

In addition, Claim 14 recites "an electrical disconnect." Haessig does not disclose an electrical disconnect. The Examiner takes Official Notice that electrical disconnects are conventional in the air conditioning art. However, the Examiner does not provide a suggestion or motivation for including an electrical disconnect as an element of a flow control unit. Therefore, the first element of the *prima facie* case of obviousness is not satisfied with respect to Claim 14.

Applicants recognized that providing an electrical disconnect as part of a flow control unit provides advantages over the prior art. For example, Page 8, Lines 9-14 of Applicants' specification provides:

Providing a disconnect on each flow control unit allows a unit to be powered down for service, without interrupting power to other units. Further, the disconnects need only be rated for the amount of power required to drive a single flow control unit.

The cited prior art does not even recognize the disadvantages that Applicants' invention overcomes.

Claims 15-19 depend, either directly or indirectly, from Claim 14 and are, therefore, distinguished from the prior art for at least the same reasons as Claim 14.

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In addition, Claim 15 recites "said electrical disconnect is mounted on said plenum." The Examiner has not identified any teaching or suggestion in the prior art for mounting an electrical disconnect on the plenum of a flow control unit. Therefore, no prima facie case of obviousness is established with respect to Claim 15.

Claim 16 recites "a voltage converter electrically coupled to receive power from said disconnect. The Examiner takes Official Notice that electrical voltage transformers are conventional in the air conditioning art. However, the Examiner does not provide a suggestion or motivation for including a voltage converter as an element of a flow control unit. Therefore, the first element of the prima facie case of obviousness is not satisfied with respect to Claim 16.

Claims 17-19 depend, either directly or indirectly, from Claim 16 and are, therefore, distinguished from the cited prior art for at least the same reasons as Claim 16.

**Claim 22:**

Claim 22 is directed to a method of installing a flow control unit by assembling the flow control unit (including a flow sensor) and installing the assembled flow control unit in a ventilation system. Haessig is silent with respect to how the terminal unit 42 is assembled and installed. Further, as indicated above, flow sensor 80, 80A of Haessig is not mounted in terminal unit 42, but is mounted in an adjacent primary air duct. Thus, sensor 80, 80A is not installed as part of an assembled flow control unit, as recited in Claim 22.

Because Haessig does not teach or suggest every element of Claim 22, no prima facie case of obviousness is established with respect to Claim 22. Applicants note that the Examiner has not made any specific rejections with respect to any of the method claims included in this application. Although the method claims are listed with the rejected device claims, the method claims are not specifically addressed.

**Claims 26-27:**

Claim 26 is directed to a method of installing a flow control unit by assembling the flow control unit (including a flow sensor and an electrical disconnect) and installing the assembled flow control unit in a ventilation system. As indicated above with respect to Claim 22, Haessig is silent with respect to how terminal unit 42 is assembled and installed, and the flow sensor 80, 80A of Haessig is separate from terminal unit 42. In addition, Haessig does not disclose the

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steps of assembling an electrical disconnect into a flow control unit and installing the assembled flow control unit into a ventilation system. For at least these reasons, no *prima facie* case of obviousness is established with respect to Claim 26.

Claim 27 depends from Claim 26 and is, therefore, distinguished from the cited prior art for at least the same reasons as Claim 26. In addition, Haessig fails to teach a method of assembling a flow control unit including an electrical converter and installing the assembled flow control unit into a ventilation system. Therefore, no *prima facie* case of obviousness is established with respect to Claim 27.

For at least the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 7-9, 12-19, 22, 26-27, and 43-44.

Claims 1-2, 4-6, 28, 30-42, and 45 are rejected under 35 U.S.C. § 103 as being unpatentable over Haessig in view of Official Notice as applied to Claim 7 and further in view of Noboru (JP 04363695 A). The Examiner writes:

Noboru teaches the use of an isolation valve 7 on the inlet of a ventilation system as well as control valves on the exhaust and return lines. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Haessig such that it included the use of an isolation valve on the inlet of the ventilation system as well as control valves on the exhaust and return lines in view of the teachings of Noboru.

Applicants respectfully traverse.

Claims 1-2 and 4-6:

Claims 1-2, and 4-6 depend, either directly or indirectly from Claim 14, and are therefore distinguished from the cited prior art for at least the reasons provided above with respect to Claim 14.

In addition, Claim 1 recites "an isolation valve fixed to said plenum to selectively block the flow of air between said plenum and said flow controller." However, as the Examiner points out, Noboru teaches the use of an isolation valve on the inlet of a ventilation system as well as control valves on the exhaust and return lines. The stated purpose of Noboru is to prevent an

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outside discharge of radioactive substances from a nuclear reactor building by providing a bypass ventilation route inside the building. Indeed, it appears to Applicants that the system of Haessig already includes the isolation/bypass system of Noboru in the form of motor driven dampers 53, 59, and 61. There is nothing in Noboru that suggests including an isolation valve in the terminal unit 42 of Haessig. Note that terminal unit 42 is only one of a plurality of such units.

Because there is no suggestion or motivation to modify Haessig to include "an isolation valve fixed to said plenum to selectively block the flow of air between said plenum and said flow controller," no *prima facie* case of obviousness is established with respect to Claim 1.

Claims 2 and 4-6 depend either directly or indirectly from Claim 1, and are therefore distinguishable over the cited prior art for at least the same reasons as Claim 1.

Claims 28 and 30-33:

Claim 28 is a method claim directed to a method including assembling a flow control unit (including a flow sensor, an electrical disconnect, and an isolation valve) and installing the assembled flow control unit in a ventilation system. Claim 28 is distinguishable over the prior art of record for at least the reasons provided above with respect to Claims 22 and 26. In addition, the assembled flow control unit includes an isolation valve, and is therefore distinguishable over the prior art of record for at least the reasons provided above with respect to Claim 1.

Claims 30-33 depend, either directly or indirectly, from Claim 28 and are, therefore, distinguishable over the cited prior art for at least the same reasons as Claim 28.

Claims 34-42:

Claim 34 is directed to a ventilation flow control system including first and second flow control units and a control unit, which control the flow of air into and out of a room, respectively. The terminal unit 42 of Haessig controls the flow of air into a room (controlled space 46), but there is no second flow control unit to control the flow of air out of controlled space 46. The Noboru reference does not appear to address flow control into and out of individual rooms. Note that according to Claim 34, each flow control unit includes its own

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sensor. Nothing in either of the cited references discloses providing two separate sensors for monitoring the flow of air into and out of a room, respectively.

Because the cited references, when combined, do not teach or suggest every element of Claim 34, no *prima facie* case of obviousness is established with respect to Claim 34.

Claims 35-42 depend, either directly or indirectly, from Claim 34 and are, therefore, distinguished from the cited prior art for at least the same reasons as Claim 34.

For the above reasons Applicants request reconsideration and withdrawal of all rejections under 35 U.S.C. § 103.

Official Notice:

Applicants generally agree with the Examiner taking official notice that electrical disconnects, voltage transformers, automatic control valves, and mounting brackets are conventional in the air conditioning art. However, Applicants object to the characterization of wire terminals as an electrical disconnect.

Request for Constructive Assistance

Should the Examiner disagree that the pending claims are allowable, Applicants request the constructive assistance of the Examiner in expediting the prosecution of this application. The pending claims have been indicated to include allowable subject matter in three prior office actions, two from the previous Examiner and one from the current Examiner. Applicants have attempted each time, at significant expense, to accept the claims indicated by the Examiner to include allowable subject matter, only to have those claims subsequently rejected. Any assistance in expediting the prosecution of this application will be greatly appreciated.

For the foregoing reasons, Applicants believe Claims 1-2, 4-9, 12-19, 22, and 26-28, and 30-45 are in condition for allowance. Should the Examiner undertake any action other than allowance of Claims 1-2, 4-9, 12-19, 22, and 26-28, and 30-45, or if the Examiner has any questions or suggestions for expediting the prosecution of this application, the Examiner is requested to contact Applicants' attorney at (269) 279-8820.

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Respectfully submitted,

Date: 12/27/05

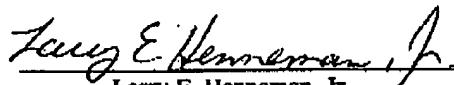


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**CERTIFICATE OF FACSIMILE TRANSMISSION (37 CFR 1.8(a))**

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being transmitted via facsimile, on the date shown below, to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, at (571) 273-8300.

Date: 12/27/05



Larry E. Henneman, Jr.